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2812

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Akitaka YAJIMA et al.

Group Art Unit: 2812

Application No.: 09/925,315

Examiner: A. STEVENSON

Filed: August 10, 2001

Docket No.: 110344

For: LIQUID CRYSTAL LIGHT VALVE AND PROJECTION DISPLAY DEVICE INCLUDING THE SAME

REQUEST FOR RECONSIDERATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In reply to the August 20, 2003 Office Action, reconsideration is requested based on the following remarks.

Claims 1-14 are pending. Claims 3-11 are withdrawn from further consideration. Reconsideration in view of the following remarks is respectfully requested.

Applicants appreciate the Examiner indicating that claim 12 includes allowable subject matter.

I. The Specification Satisfies All Formal Requirements

The specification is objected to for failing to provide proper antecedent basis for the subject matter of claim 2. Specifically, the Office Action asserts that the specification states that the structure of the polarization conversion element array 362 is exactly the same as that of the polarization conversion element array 361. Thus, the Examiner has requested clarification with respect to the features recited in claim 2.

Applicants respectfully direct the Examiner's attention to the disclosure on page 13 of the specification, for example, which discusses the polarization degree of the first polarizer that is closer to the light exiting surface side of the liquid crystal panel being lower than a polarization degree of the second polarizer. Withdrawal of the objection to the specification is respectfully requested.

II. The Claims Define Patentable Subject Matter

Claims 1, 13 and 14 are rejected under 35 U.S.C. §102(e) as anticipated by U.S. Patent No. 6,481,854B1 to Sugawara et al. This rejection is respectfully traversed.

The applied art does not teach, disclose or suggest at least two polarizers provided at a light-exiting-surface side of the liquid crystal panel, as claimed in claim 1.

Instead, Sugawara discloses a projection type display apparatus 10 which comprises a light source 14, a polarized light conversion unit 18 and three light valves 20R, 20G and 20B. The light valves 20R, 20G and 20B comprise liquid crystal panels which form red, green and blue images. Polarizers 21 and 22 are arranged on the opposite sides of each light valve, and a condenser lens 23 is located on the light incidence side of each light valve, as best seen in Figure 1.

According to the present invention, and as best seen in Figure 1, the liquid crystal light valve 410R, for example, comprises liquid crystal panels 411R, a light incidence side polarizer 412R and at least two light-exiting-side polarizers 413R and 414R. In contrast, Sugawara discloses that the polarizers 21 and 22 are arranged on the opposite sides of each of the light valves which comprise a liquid crystal panel. Accordingly, Sugawara does not disclose that at least two polarizers are provided at a light exiting surface side of the liquid crystal panel, as claimed in claim 1.

The above discussed features of the claimed invention provide the advantage of dividing the absorbing light among each of the light-exiting-side polarizers which makes it

possible to divided the task of heat generation among the light-exiting-side polarizers. Thus, even for a dark display, the burden on and thus the light of the light-exiting-side polarizers can be reduced.

With respect to claim 2, the applied art does not teach, disclose or even suggest, nor does the Examiner particularly direct Applicants' attention to a teaching in Sugawara that discloses the polarization degree of a first polarizer of the at least two polarizers that is closer to the light-exiting-surface side of the liquid crystal panel being lower than a polarization degree of a second polarizer of the at least two polarizers, as claimed in claim 2. The above discussed features recited in claim 2 provide the advantage of allowing the ratio of division of the task of absorbing light by the first and second polarizers to be adjusted. Because the applied art does not teach, disclose or even suggest this feature, it cannot provide the advantages discussed above.

Accordingly, withdrawal of the rejection of claims 1, 13 and 14 under 35 U.S.C. §102(e) is respectfully requested.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

James A. Oliff
Registration No. 27,075

Kevin M. McKinley
Registration No. 43,794

JAO:KMM/jfl

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OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

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